

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1.-6. (Cancelled)

Claim 7. (New) A vehicle security system comprising:
an access control device having at least one action-free authentication element which can be carried by a vehicle user;
a vehicle-mounted access control component;
a wireless access authorization communications channel for access-authorization-checking communication between the at least one authentication element and the access control component, wherein the access control component generates a securing or releasing access control signal for at least one vehicle lock element only when there is a positive access-authorization-checking result;
at least one triggering element, which can be actuated by the user to request the generation of a respective securing or releasing access control signal, whereby a respective access-authorization-checking communications process is triggered and said process is carried out successfully only if an

authorizing authentication element is in the predefined action range of the access authorization communications channel; and

authentication element location means for determining whether, when an access-authorization-checking communication process is triggered, an authorizing authentication element is located outside of the vehicle in the action range of the access authorization communications channel and not in the interior of the vehicle or on the outside of the vehicle outside the action range of the access authorization communications channel; wherein

the vehicle-mounted access control component generates at least some of the possible access control signals for the at least one vehicle lock element as a function of whether the authentication element locating means determines the presence of an authorizing authentication element on the outside of the vehicle in the action range of the access authorization communications channel and not in the interior of the vehicle or on the outside of the vehicle outside the action range of the access authorization communications channel;

a device for carrying out a null measurement senses an applied field strength at a time when the vehicle does not emit a signal in response to the access authorization communications signal;

said device determines an interference level based on said null measurement;

by taking into account the determined interference level, said device either i) transmits an adapted decision threshold value for distinguishing the position of the authentication element to the authentication element locating means, or ii) rejects subsequent interrogation signals from the access control component.

8. The vehicle security system as claimed in Claim 7, wherein:

when there is an interference level that is below a predetermined threshold value, the device for performing null measurement transmits the adapted decision threshold value for distinguishing the position of the authentication element to the authentication element locating means;

when there is an interference level above the predetermined threshold value it rejects subsequent interrogation signals from the access control component.

9. The vehicle security system as claimed in Claim 8, wherein the device for performing a null measurement is embodied in the authentication element.

10. The vehicle security system as claimed in Claim 9, wherein:

for synchronizing authentication element with the vehicle, the device is provided with information about the time at which the vehicle emits pulses; and

said device performs the null measurement at times between the pulses.

11. The vehicle security system as claimed in Claim 10, wherein the authentication element is activated in response to a reception of pulses from the vehicle.

12. A method for operating a vehicle security system, having the steps:
 pulses which are intended for an action-free authentication element that can be carried by a user are transmitted by a vehicle-mounted access control component over a wireless access authorization communications channel by means of an antenna unit;

 the authentication element is activated when pulses are received by the vehicle-mounted access control component;

 the authentication element and the access control component are synchronized so that the authentication element knows the time at which the vehicle-mounted access control component emits pulses;

 during a time period in which the vehicle-mounted access control component does not emit any pulses, a null measurement is performed by a device for performing null measurement determining an interference level of an interference transmitter which is present in the same frequency range;

based on a determined interference level, the pulse is rejected, starting from a predetermined threshold value of the interference level, or if the determined interference level lies below the predetermined threshold value, a threshold value which is adapted to the determined interference level is determined in order to distinguish between an authentication element in the vehicle or on the outside of the vehicle, and the adapted threshold value is transmitted over the access authorization communications channel to the access control component by means of an authentication element locating means in order to be taken into account by the authentication element locating means during subsequent position-determining processes for the authentication element.

13. A method of operating a vehicle security system of the type in which a vehicle mounted access control component transmits pulses to an authentication element that is transportable by a vehicle operator, and generates a securing or releasing signal for at least one vehicle locking or operating component only upon receipt of a corresponding authentication signal from said authentication element, which authentication satisfies preset criteria, said method comprising:

a null period measuring device in said authentication element measuring an applied field strength at said authentication element during a null period in which said access control component does not transmit pulses;

determining an interference level based on the applied field strength determined by said null period measuring device during said null period; and

based on said determined interference level, either i) modifying said preset criteria or ii) suppressing transmission of said authentication signal by said authentication element.

14. The method according to Claim 13, wherein:

if said determined interference signal does not exceed said value, a triggering threshold for detection of presence of said authentication element is adapted to said determined interference level.

15. A vehicle security system, comprising:

a vehicle mounted access control component; and
an authentication element that is transportable by a vehicle operator; wherein,

said access control component periodically transmits an interrogation signal for receipt by an authentication element that is within an operational range;

an authentication element that is within said operational range receives said interrogation signal, for transmitting a corresponding authentication signal in response thereto;

said access control component generates a signal for securing or releasing a vehicle access or operating component, only in response to receipt of an authentication signal that satisfies present criteria;

said authentication element includes a null period measuring device for measuring an applied field strength during a null period in which an interrogation signal is not being transmitted by said access control component; and

based on said applied field strength measured by said null period measuring device, either i) said preset criteria are modified, or ii) transmission of said authentication signal is suppressed.

16. The method according to Claim 15, wherein:

if said determined interference signal does not exceed said value, a triggering threshold for detection of presence of said authentication element is adapted to said determined interference level.